SNAPSHOTS OF AMERICAN SOCIETY

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GREEN AMERICA

According to a national survey conducted by Duke University, 8 out of 10 Americans say they support pro-environmental policies. Because of this wide concern for the environment, U.S. federal, state and local governments have launched many initiatives to protect the environment and have taken the lead in innovating to develop cleaner and more efficient energy technologies. In the United States, we are on the verge of dramatic change in how we power our cars, our homes and our businesses. In many parts of the country, governors, mayors, county commissioners are leading the way toward a cleaner, safer and more secure future, though many outside the United States are unfamiliar with their programs. Examples of federal, regional, state and local government environmental efforts are surveyed below.

FEDERAL GOVERNMENT

Under President Bush, the federal government provides unparalleled funding to reduce greenhouse gases and to combat climate change, which we recognize is one of the great challenges for the 21st century. President Bush committed to cut our nation's greenhouse gas intensity - how much we emit per unit of economic activity - by 18 percent through 2012, and the U.S. is on track for meeting this ambitious goal.²

The U.S. government considers that the long-term solution to climate change lies in the development of innovative, climate-friendly technologies that lessen greenhouse gas emissions, while allowing the economic growth necessary for sustainable development, and is investing in climate science research, clean coal technology, bio-fuels/energy, renewable energy sources, nuclear power, and the promotion of energy efficiencies across economic sectors. From 2001 through 2006, the U.S. federal government will have spent over \$25 billion -- more than all other nations -- on climate change initiatives.

The Energy Policy Act of 2005 includes an aggressive Renewable Fuel Standard that will double the amount of renewable fuel produced from American crops by 2012, and in his

¹ http://www.dukenews.duke.edu/2005/09/nicholaspoll.html

http://www.state.gov/g/oes/climate/

³ http://www.whitehouse.gov/stateoftheunion/2006/index.html

2006 State of the Union speech, President Bush announced a 22% increase in funding for clean-energy research to focus on zero-emission coal-fired plants, revolutionary solar and wind technologies, and clean and safe nuclear energy.³

The United States also actively partners in more than 200 international environmental treaties and treaty negotiations, including agreements to protect the ozone layer, preserve wetlands, safeguard endangered species, conserve natural resources, promote sustainable fisheries and reduce hazardous chemicals. Last year, the United States launched the Asia-Pacific Partnership on Clean Development and Climate with partner countries including two of the fastest growing economies in the world, India and China, to collaborate together with the private sector on energy security, national air pollution reduction, and climate change in ways that promote sustainable economic growth and poverty reduction.⁴

REGIONS

Local leaders have launched many initiatives, mainly in the Northeast, the Midwest and on the West Coast.

The Climate Northeast Partnership.⁵ In 2003, New York Governor George Pataki initiated the Regional Greenhouse Gas Initiative, a landmark agreement among nine northeastern states to reduce carbon dioxide emissions 10 percent below current levels by 2020, thus encouraging investment in cleaner technology. The pact was signed in December 2005 by New York, Connecticut, Delaware, Maine, New Hampshire, New Jersey, and Vermont. The partnership in effect establishes the first government-mandated greenhouse gas trading system in the United States.

The seven member states created a flexible system of pollution permits, called allowances. Each state will issue one allowance for every one of the 121 million tons of carbon dioxide produced in the region by power plants. At least 25% of those allowances will be auctioned, with the proceeds going to consumer subsidies or conservation projects. The rest will be provided to power plant operators free of charge.

This initiative is the first of its kind in the nation and many believe the seven New England states are leading the 21st century's energy revolution. "Our environment is a vibrant, living resource that needs to be protected, and I am proud that a coalition of

6 http://www.ny.gov/governor/press/05/1220052.htm

⁴ http://www.asiapacificpartnership.org/

⁵ http://www.climatenortheast.org,

Northeast states is taking action to address this major environmental challenge," said George Pataki signing the memorandum of understanding.⁶

The West Coast Governors' Global Warming Initiative⁷ was launched in September 2003 by Washington, Oregon and California. The three governors committed their states to act "individually and regionally to reduce greenhouse gas emissions" through strategies that "provide long-term sustainability for the environment, protect public health, consider social equity, and expand public awareness." They approved joint recommendations in late 2004 for reducing pollution that include a CO2 cap-and-trade program, and, in 2005, the Governor of Oregon, Ted Kulongoski, created the Oregon Carbon Allocation Task Force to design a cap-and-trade program that can be presented to the Oregon legislature in 2007 and form the basis for a program that California and Washington could support.

The Western Governors' Association Clean and Diversified Energy Initiative⁸ launched in 2004, represents 18 western states. Together they aim to reach a goal of 30,000 megawatts of clean energy by 2015 and a 20 percent improvement in energy efficiency by 2020.

The Governors' Ethanol Coalition⁹, a bipartisan organization created in 1991 and chaired in 2006 by Kansas Governor Kathleen Sebelius, includes the governors of 32 states and representatives from five foreign nations. The coalition is committed to promoting the use of ethanol as a viable alternative fuel by raising awareness and demonstrating the benefits of ethanol use, encouraging production, research and development efforts and making infrastructure investments to support the expansion of the ethanol market. The coalition supports the production of ethanol from corn or other domestic, renewable resources using sustainable agricultural methods.

The International Council on Local Environmental Initiatives¹⁰, founded in 1990, offers a framework for local governments to reduce greenhouse gas emissions and improve livability within their municipalities. 157 U.S. cities and counties, scattered across 35 states, participate. They saved \$600 million and reduced greenhouse gases by 23 million tons in 2005.

11 http://www.sundancesummit.org

⁷http://egov.oregon.gov/ENERGY/GBLWRM/WCGGWI.shtml

http://www.westgov.org/wga/initiatives/cdeac/index.htm

⁹ http://www.ethanol-gec.org

¹⁰ http://www.iclei.org

The Sundance Summit¹¹, which drew 45 mayors from cities representing 10 million Americans in July 2005, produced an agreement to reduce greenhouse gas emissions. All mayors agreed to increase their use of renewable energy sources, educate and engage their citizens on the importance of reducing emissions of greenhouse gases, coordinate with state and federal agencies to maximize potential resources, and create a communication network to share successes, information and resources. The summit group plans to meet annually.

The U.S. Conference of Mayors¹². At their last meeting in June 2005, the Conference passed a resolution endorsing the U.S. Mayors Climate Protection Agreement calling for cities, communities and the federal government to take actions to reduce global warming pollution. 192 mayors representing more than 40 million Americans in 38 states have signed an urban anti-global-warming agreement which commits them to meet or exceed the Kyoto Protocol standards, reducing greenhouse gas emissions 7 percent below 1990 levels by 2012.

STATES

State governments have a large array of tools at their disposal, with great control over utilities, building codes, tax incentives, agriculture and land use, and they are imitating and learning from each other. They utilize these measures to improve air quality, lessen traffic congestion, secure energy supply and reliability, and improve the quality of life of their inhabitants while creating opportunities for job growth.

State action on climate change has intensified since the late 1990s. The individual states have pursued a variety of approaches to climate change, including the promotion of renewable energy, air pollution controls, energy development, and solutions in the agriculture, forestry, transportation, and waste management sectors. Their widespread priorities are the promotion of energy independence and combating global warming. Altogether, more than 30 states have approved global warming laws of one sort or another including conservative, energy-producing states such as Texas, Colorado and Montana. In Texas, for instance, Republican Governor Rick Perry in summer 2005 raised the state's renewable energy standard to require that 5 percent of power be generated from renewables by 2009 — and to double that by 2025. 21 states plus the District of Columbia have mandated "renewable portfolio standards," requiring a portion of electrical power to be generated from renewable sources. 13 State and regional climate differences determine the energy mix triggered by the new portfolio standards: Arizona

¹² http://usmayors.org 13 http://epa.gov/CHP/pdf/rps_factsheet.pdf

favors solar energy, North and South Dakota use wind as their primary source, Rhode Island is investing in developing energy from offshore waves, and the farm belt (Ohio, Kansas, Minnesota) use land to grow crops for biomass. Iowa, for instance, has 19 ethanol plants and plans to have 27 by the end of 2006, according to the Iowa Renewable Fuels Association.

California

California has adopted ambitious goals to reduce emissions and is a leader in the fight against global warming. The state represents one of the 10 largest economies in the world and is the 12th largest producer of greenhouse gases, the byproducts of industry, agriculture and motor vehicle use. It has, however, the nation's most stringent air pollution laws. Specific California programs have strong public support. 77 percent of Californians support a state law requiring automobile manufacturers to cut greenhouse gases in new cars starting in 2009, while 69 percent support Governor Arnold Schwarzenegger's call to reduce greenhouse gas emissions by 80 percent over the next 50 years. His "million solar roofs" plan was backed by 76 percent of Californians, and his "hydrogen highway" proposal by 55 percent. 14

- Voluntary actions by a number of California companies support the Governor's targets. More than 50 companies have joined the voluntary California Climate Action Registry¹⁵. They report their emissions and implement best practices to reduce these emissions. In Silicon Valley, dozens of corporations have committed to reducing their emissions to 20 percent below 1990 levels by 2010.
- California is the world's third-largest market for solar energy and the nation's leading producer of wind-generated power. Regulators approved the first stage of a plan to make the state a leader in solar energy. The Public Utilities Commission voted unanimously to triple state financing for solar energy in 2006, from \$100 billion to \$300 billion, after receiving more than 5,000 letters supporting the program. The commission is also considering a \$3 billion plan to install panels to produce 3,000 megawatts of solar energy for one million homes, businesses and public buildings over 11 years.
- Beginning October 1, 2005, new homes built in California must meet more stringent energy-efficiency requirements. Under the standards set by the California Energy Commission¹⁶, fluorescent fixtures must provide at least half the light in kitchens. Bathrooms, laundry rooms, utility rooms and garages must have fluorescent lights or motion sensors for incandescent lights. The new rules are expected to save at least 30% of an average home's lighting costs. Building efficiency standards and the use of energyefficient appliances have saved more than \$56 billion in electricity and natural gas

http://www.ppic.org/main/publication.asp?I=623http://www.climateregistry.org/

¹⁶ http://www.energy.ca.gov/

expenses since 1978. The new standards should save an added \$23 billion by 2013 as California's new home market is growing at approximately 200,000 homes per year.

• California's most ambitious policy to reduce greenhouse gases is the state's new auto emissions standards. Motor vehicles are the largest source of heat-trapping emissions in the state: with about 26 million vehicles on its roads, California represents 10 percent of the national auto market. For three decades, California has set the benchmarks for auto emissions standards, and the 2002 passage of the California Vehicle Global Warming Law made California's government the first in the world to require limits on heat-trapping emissions from passenger vehicles. In September 2004, the California Air Resources Board approved regulations to reduce climate change emissions from new passenger vehicles and light duty trucks beginning with the 2009 model year. When fully phased in, the near-term (2009–2012) standards will result in about a 22 percent reduction as compared to the 2002 fleet, and the mid-term (2013–2016) standards will result in a roughly 30 percent reduction.

California's new emissions standards have already made an impact nationally. Under the federal Clean Air Act, California may establish pollution standards for cars and trucks that are more stringent than federal standards. Other states can choose California's standards. Connecticut, Maine, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington have adopted California's tailpipe standards to reduce greenhouse gas emissions from cars, and more states are exploring the option.

California is also implementing policies to buy the most efficient vehicles for state fleets and reduce petroleum consumption by 15% from 2003 levels by 2020.

Additionally, Governor Arnold Schwarzenegger has implemented a program to develop a "hydrogen highway" in California with at least 150 hydrogen-fueling stations, to spur the development and sale of hydrogen vehicles. To date, 27 stations have been built nationwide. California boasts the most hybrid cars in the nation, followed by Virginia, Washington, Florida and Maryland.

New York

- New York first adopted the California Low Emission Vehicle program in the early 1990s, requiring that 2% of new car sales by 1998, 5% by 2001 and 10% of all large automobiles sold from 2003 onward be zero-emission vehicles, i.e., cars powered by electricity or alternative fuels.
- New York City is the first major city to deploy hybrid taxicabs on a regular basis thanks to the "Clean Air Taxis Act" implemented in 2005. These hybrid taxis will help clear the air for citizens of New York and provide major gas-savings for their operators.

According to the New York City Taxi and Limousine Commission, each New York taxi averages nearly 100,000 miles of driving annually. The fuel savings for operators are expected to reach thousands of dollars every year.

• New York State's vehicle fleet includes more than 4,600 alternative-fueled vehicles. Fuels used include ethanol, compressed natural gas, or propane. In addition, Governor Pataki has decided that by the end of the decade, every non-emergency vehicle purchased by the State (approximately 1,200 per year) will be an alternative-fueled vehicle.

Other initiatives enacted by the Governor include:

- A "Green" Power Mandate for State Agencies. In 2001, the Governor issued an Executive Order requiring that by 2010, at least 20 percent of the overall State facility energy requirements are met through the use of renewable "green" energy sources.
- The Governor issued an executive order requiring all state authorities to reduce energy use by 35% by 2010, relative to 1990 levels. The initiative is expected to reduce CO2 emissions by some 1.4 million tons per year by 2010. 100% of light-duty non-emergency vehicles must be alternatively fueled by 2010. In addition, state facilities must purchase 20% of their energy from renewable energy sources.
- New York now has one of the most aggressive renewable portfolio energy standards in the nation, requiring 25% clean energy by 2013. Within the next year, up to three ethanol plants are expected to begin production in New York State. The Governor wants to make ethanol and bio-diesel available in the 27 service areas on the New York State Thruway and in 100 more stations throughout the state in 2006, in a first step toward reducing the state's petroleum consumption.
- New York's comprehensive State Energy Plan, adopted in 2002, established goals to reduce greenhouse gas emissions by 5% below 1990 levels by 2010, and increasing to 10% below 1990 levels by 2020.

CITIES

80 percent of the U.S. population lives in urban areas. A number of mayors are competing to transform their cities into environmental havens. Cities are in a unique position to provide incentives for investing in renewable energy and building greener buildings. They can design urban environments to be more energy efficient, build mass-transit systems, curb the use of cars, and provide incentives for power companies to switch cleaner fuels. These initiatives usually bring huge benefits: less tax money spent on energy, more convenient transportation, an expertise in energy efficiency that helps local businesses win contracts worldwide, to say nothing of a cleaner environment.

Seattle

Seattle has been a leader in recycling, water conservation, and energy efficiency. Seattle Mayor Nickels won the "2005 City Livability Award" for improving his city's quality of life through the Seattle Climate Protection Initiative. "We're proud to serve as an example to other cities that you don't have to make a choice between your environment and your economy. You can improve both.... As a City government, we've already cut our greenhouse gas emissions by more than 60% compared to 1990 levels. But it's not enough - we need to work together as a community to set responsible limits on global warming pollution". ¹⁷

- * The new City Hall, Justice Center, McCaw Performance Hall and other city buildings have been built according to 'green' standards, i.e., they are resource-efficient and healthy for people and the environment.
- * The number of hybrid gas-electric, ultra-low sulfur diesel and bio-diesel vehicles in the city's fleet is increasing. All the heavy duty diesel trucks of the city's fleet will be retrofitted with emission control devices, thus cutting toxic emissions and particulates by approximately 50 percent. Only the cleanest diesel fuel available is used by the city's 500 diesel vehicles: B20, a combination of ultra-low sulfur diesel and bio-diesel.
- * City departments must reduce paper use 30 percent by end 2006.
- * City Light, Seattle's publicly owned electric utility, has reached a goal set 10 years ago of a zero net greenhouse gas emission, thanks to a program that emphasizes conservation and renewable energy. More than 90 percent of the electricity sold by the utility last year came from hydroelectric dams, with nuclear plants providing 4 percent. Smaller amounts were tapped from wind farms, and natural gas- and coal-fired power plants.
- * City Light has already contracted for 100 peak megawatts of wind energy and acquired 14.5 megawatts of conservation. The utility provided financial and technical support through a Green Power Program for 9 solar-energy systems at Seattle schools and parks and supported state legislation for increased energy efficiency and renewable energy supply that allows flexibility for utilities to meet those goals.
- * The Fleets and Facilities Department, Seattle Public Utilities' waste haulers and, soon, the Washington State Ferries, will switch to bio-diesel.
- * In September 2005, Mayor Nickels issued an order directing city departments to replace every tree removed from city property with two new trees. The mayor's proposed 2006 budget includes \$170,000 for tree planting.

¹⁷ http://www.ci.seattle.wa.us/environment/climate protection.htm

- * The Clean Seattle Initiative was launched, and city workers and neighbors together participate in parks and streets clean up activities. In 2003, 12 neighborhoods were cleaned with more than 1,500 volunteers.
- * To improve inter-city transportation, the city chose to construct a light rail system, and secured \$75 million in federal funding, improved traffic flow through better signal timing and resurfacing streets, supported the Monorail and proposed South Lake Union street cars as healthier, cleaner transportation choices. Individuals who carpool or sell their second car received incentives, including cash or limited free use of 130 shared, cityowned cars.
- * New rules were implemented to re-establish Seattle as a national recycling leader. 100,000 recycling bags were distributed to apartment buildings and condos throughout the city to increase recycling in multi-family buildings. 60 percent of Seattle's residential waste gets recycled, according to the mayor.
- * Furthermore, the city provided incentives and technical assistance to accelerate environmentally sustainable design and construction practices in the private sector.

Portland

Many consider Portland as the country's environmental laboratory because in 1993 it became the first local government in the United States to adopt a strategy to deal with climate change. It has achieved stunning reductions in carbon emissions, bringing them to the levels of 1990, the benchmark under the Kyoto accord system. And this cut in emissions did not entail large economic outlays; on the contrary, it has engendered significant benefits: less tax money is spent on energy, the transportation system is more convenient, the city greener, and Portland's expertise in energy efficiency is helping local businesses win contracts worldwide.¹⁸

The reduction in emissions is due in large part to a major increase in public transit, including two light-rail lines. Since 1990, the growth in public transit use has reached 75 percent. The city encourages walking and bicycle commuting: 750 miles of bicycle paths have been built, and the number of people commuting by foot or on bicycle has increased 10 percent. Besides telling local companies that if they give employees free parking they should also subsidize employees' bus passes, Portland offers all city employees either a \$25-per-month bus pass or car-pool parking.

* Portland purchases renewable energy for more than 10% of its electricity use. All bulbs in traffic lights have been replaced with light-emitting diodes that cut electrical use by 80 percent

¹⁸ http://www.sustainableportland.org

- * The city's recycling rate of 53% is among the highest in the nation.
- * The city has planted over 750,000 trees and shrubs since 1996, improving the quality of local waterways as well as absorbing carbon dioxide from the atmosphere.
- * During the last decade, the number of cyclists has tripled in Portland. A newly opened bike path links the airport (which has free bike parking) to the rest of Portland's bicycle network.
- * The city offers financial incentives and technical assistance to anyone constructing an energy efficient "green building."
- * Portland has also joined the Chicago Climate Exchange and made legally binding commitments to reduce emissions.

Chicago

Chicago has been named one of the 10 top "greenest" U.S. cities by the nonprofit Green Guide consumers news service - - and Mayor Daley said he wants his town to be No. 1 on that list.

- * Chicago started a voluntary carbon emissions reduction program similar to the one in the European Union that sets pollution targets for companies and awards bartering points for meeting goals. Companies can trade greenhouse gas emissions credits at the Chicago Climate Exchange 19, North America's first pollution trading market, and leverage pension funds to make companies more attentive to global warming. The Chicago Climate Exchange allows companies and governments that exceed reduction targets to make money selling allowances to underperformers. Sellers and buyers both agree to reduce emissions output by 1 percent a year.
- * Chicago intends to purchase 20 percent of its electricity from wind, solar and other renewable energy sources by next year.
- * The city is promoting a public commuter-bicycle station which offers 24-hour secured parking, showers, and bike repairs. Some 750,000 of the city's residents ride bikes on more than 120 miles of bike lanes in the streets.
- * Chicago is offering housing developers and apartment-building owners incentives if they build "green roofs", i.e., roof gardens which insulate better and improve air quality. City Hall now has a 20,000-square-foot rooftop garden, designed to reduce the "urban heat island" effect.
- * The city's fleet vehicles are fitted with low emission engines, twenty of which will have diesel-electric hybrid ones. The hybrids, each costing US\$530,000, will improve fuel efficiency and lower emissions. New buses equipped with low emissions engines will reduce annual emissions levels of the fleet by 203 tons, or 10 percent.

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¹⁹ http://www.chicagoclimatex.com

Conclusion

The success and popularity of the programs developed by states, municipalities and other political subdivisions in the United States constitute a significant, collective step in furthering the efforts to protect the environment. Many, if not most, American citizens are now seized with the necessity to change habits, and technologies, and to find proactive, pro-growth solutions, "to think globally and act locally" For a more sustainable future. Taken together, these actions are having profound, positive effects on the future.